## ABSTRACT OF THE DISCLOSURE

The invention relates to a microfluidic device including a microfluidic chip (10) assembled to an electrospray structure (1), wherein the microfluidic chip includes at least one microfluidic channel (11) leading through an outlet aperture (12) to a surface area of the microfluidic chip, wherein the electrospray structure includes at least one thin, planar point (3), which point is provided with a capillary slot (4) which terminates at the end (5) of the point so as to form an aperture for ejection of a liquid to be sprayed. The electrospray structure is arranged on the surface area of the microfluidic chip so that the point (3) is cantilivered with respect to the microfluidic chip (10) so that the outlet aperture (12) of the and microfluidic device leads to the capillary slot (4) of the point, which microfluidic device also has means for applying an electrospray voltage to the liquid to be sprayed.

Figures 2A and 2B